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Automated Repair Service Bureau:

Preface

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A family of computer-based operations support systems, the Automated Repair Service Bureau (ARSB), has been introduced at Bell Operating Companies. The ARSB includes the Loop Maintenance Operations System and the Mechanized Loop Testing System. A third component, the Loop Cable Maintenance Operations Support System, is in an earlier stage of introduction.

On May 3, 1971, at AT&T in Newark, New Jersey, representatives from AT&T, New York Telephone, and Bell Laboratories met to discuss repair service records. Although the operation of the telephone network had been highly automated for decades, the need for streamlining, perhaps mechanizing, support operations, such as repair service, was just becoming apparent. This first became an issue with those Bell operating companies (BOCs) serving densely populated metropolitan areas. There, the rapid growth of the telephone system, coupled with inexperienced repair service craft persons made rendering of quality service to customers increasingly difficult. New York Telephone was one of the first to experience this problem and to bring it to the attention of AT&T and Bell Laboratories. The meeting produced tangible results: The conception of the Loop Maintenance Operations System (LMOS), one of the most widely deployed operations support systems and the charter system of the Automated Repair Service Bureau (ARSB).

Fortunately, decreasing effort on government systems freed personnel at Bell Laboratories to study the technical feasibility and economics of mechanizing the repair service operations, which included both the

administration of customer trouble reports and testing. This effort resulted in the first mechanized repair service bureau—the New York City 73rd Street Bureau—in December, 1972.

The ARSB has now been introduced at every BOC. The LMOS will soon be serving virtually 100 percent of Bell System lines, and use of the second major component system, Mechanized Loop Testing (MLT), developed two years later, is following closely behind. The family now includes the Loop Cable Maintenance Operations System (LCAMOS), for predicting, tracking, and analyzing cable troubles. In many cases, the availability of the mechanized repair records has played a major role in the restoration of service following disasters, such as floods, hurricanes, and fire.

This special issue of *The Bell System Technical Journal* tells the complete story. It demonstrates that a successful system requires the contribution of people with different disciplines and organizational ties. Many times, seemingly insurmountable problems were overcome simply because someone from a different organization with a different point of view could see a solution that had escaped those who were too close to the problem.

Obviously, many people played a role in the conception, design, development, manufacture, implementation, and operation of ARSB. This issue is dedicated to them.